



# ***Milwaukie Rotary Club***

## ***November 28, 2006***

### ***Wahed Abdul***

### ***Waste Treatment & Immobilization Plant***

### ***Office of River Protection***



**Office of River Protection**



**CH2MHILL**  
Hanford Group, Inc.

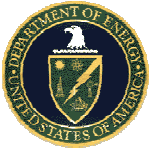


**Bechtel National, Inc.**

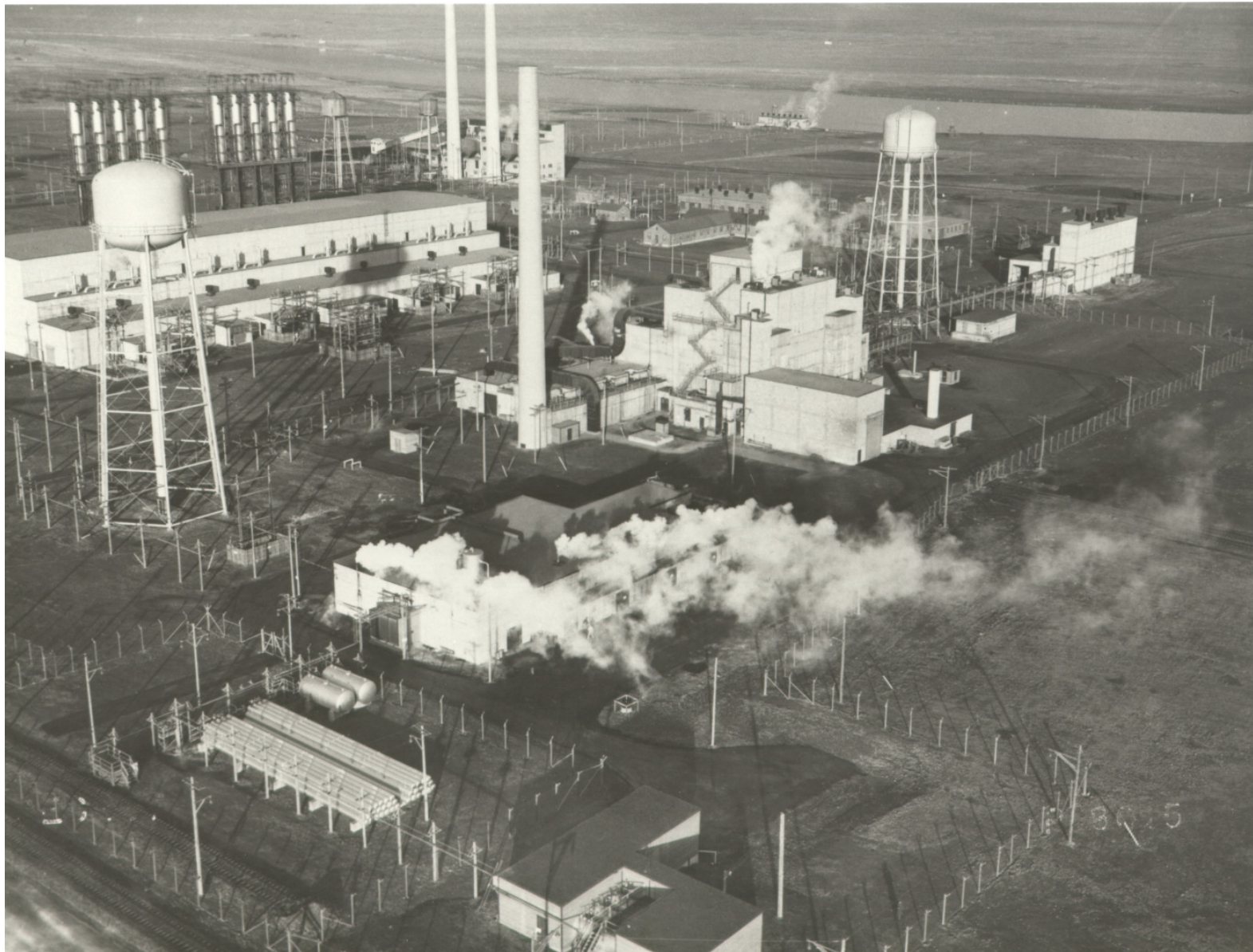


**Washington Group  
International**





## *Hanford's B Reactor, as it stood in 1945*





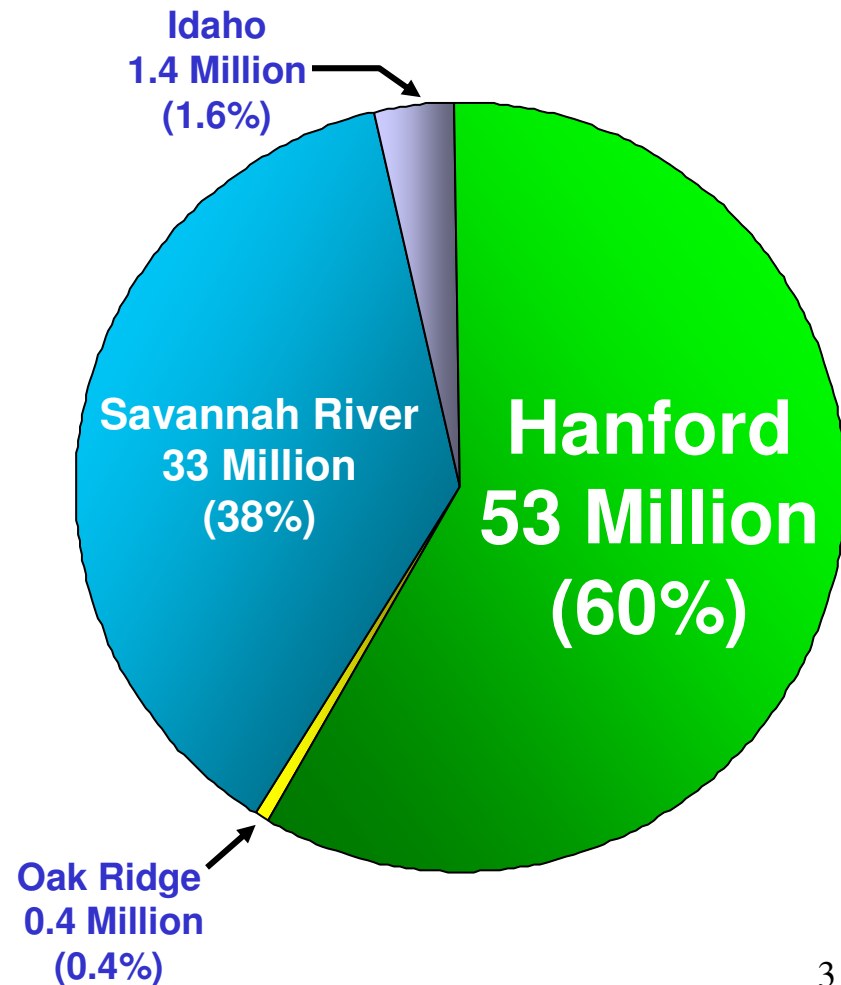
# Hanford Tank Waste Cleanup Challenge



## Hanford has:

- ❑ 63% of DOE tanks; 80% of DOE single-shell tanks
- ❑ 60% of DOE total tank waste
- ❑ ~194 million curies of radioactivity in tanks (148 million already removed)
- ❑ ~190,000 tons of chemicals

## Total Number of Gallons in Waste Tanks at DOE Sites:





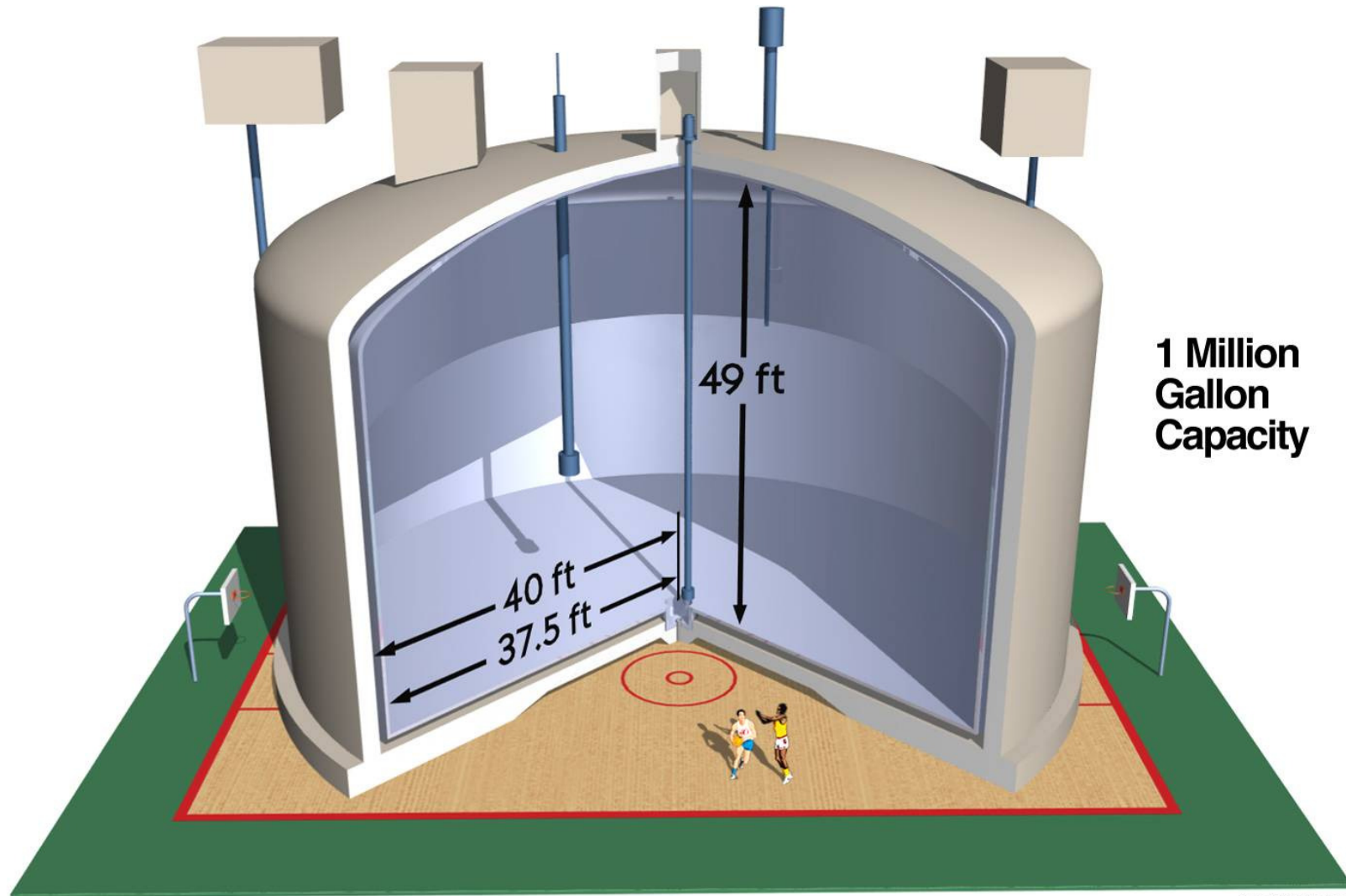
## *Double-Shell Tanks under construction*

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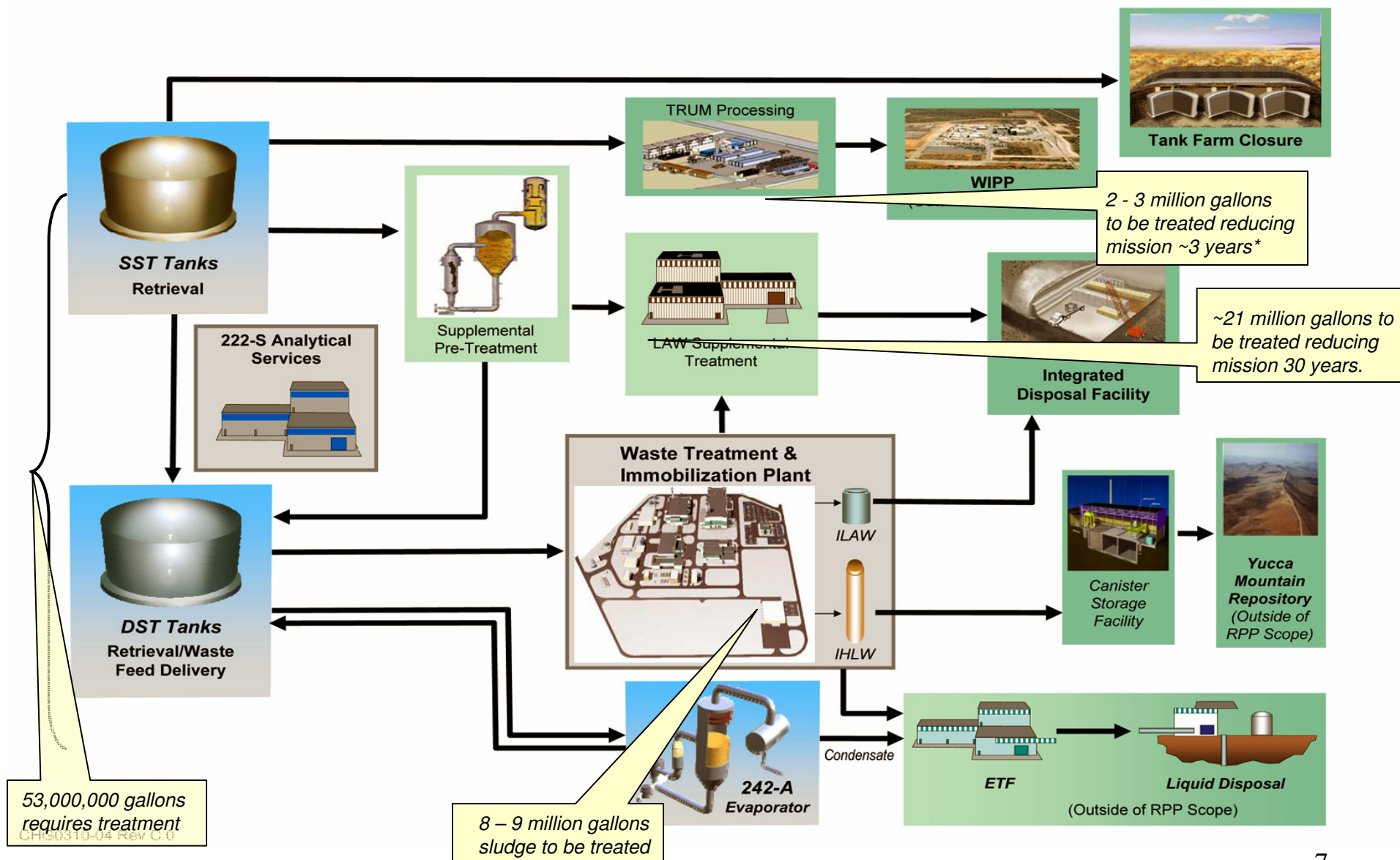
## Double-Shell Tank



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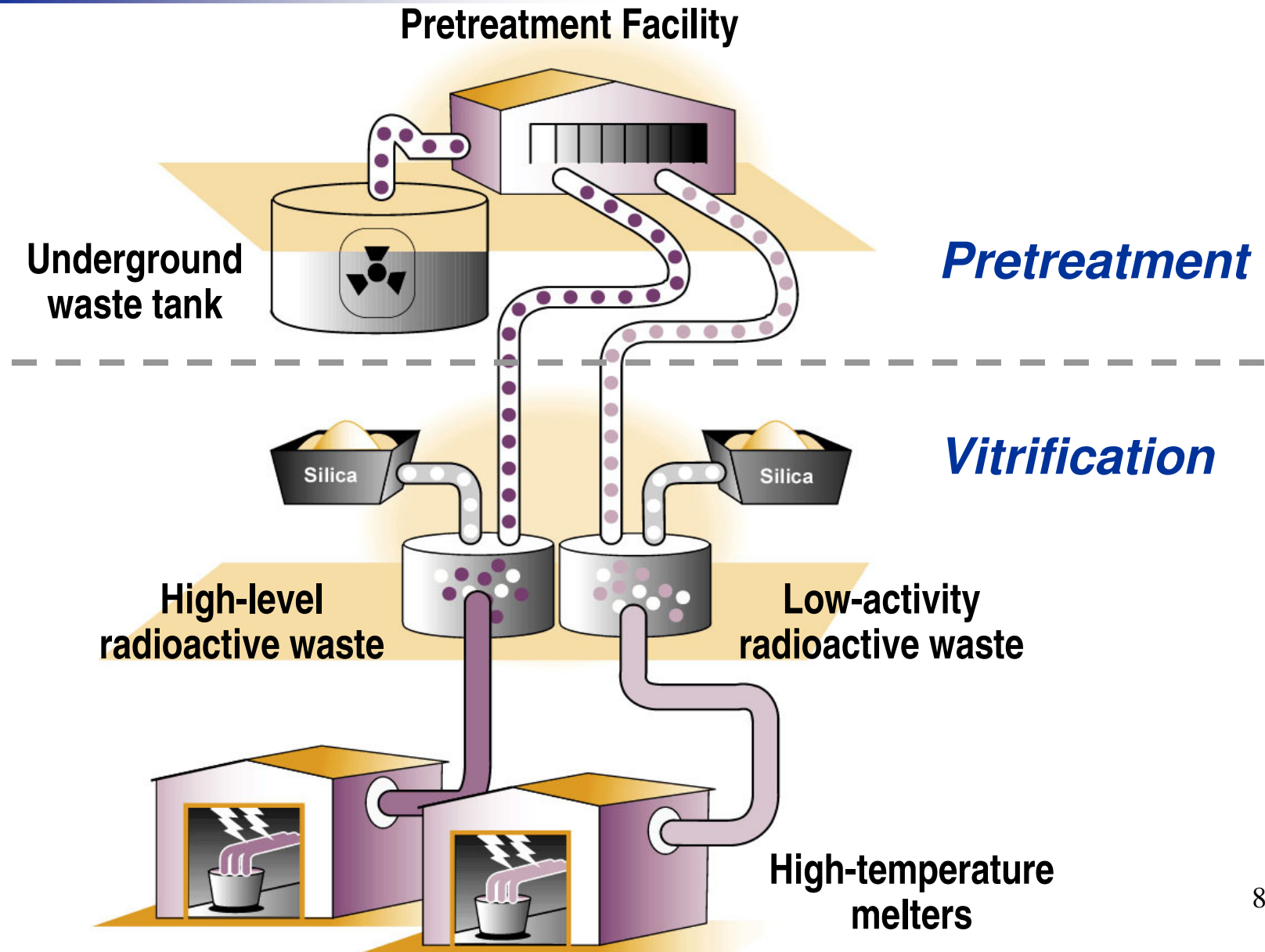
# River Protection Project Mission



\*A decision for disposal at the Waste Isolation Pilot Plant (WIPP) will not be made until (1) the waste meets the WIPP Waste Acceptance Criteria, with special emphasis on the waste determination as delineated in the WIPP recertification decision by the Environmental Protection Agency in March 2006; and (2) it meets the regulatory eligibility requirements for disposal as described in the WIPP Hazardous Waste Facility Permit.



# *Waste Treatment Process*





## *How is the Vitrified Waste Stored?*

### **High Level Waste Canisters**

- 2' X 14.5'
- 6,600 pounds of glass
- Temporarily stored in Hanford's Canister Storage Building until national repository built

### **Low Activity Waste Containers**

- 4' X 7.5'
- 13,000 pounds of glass
- Stored at Hanford's Central Plateau





## *WTP Facilities*





## *Raising stack*

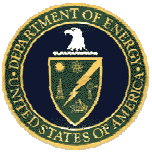
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## *Raising stack*



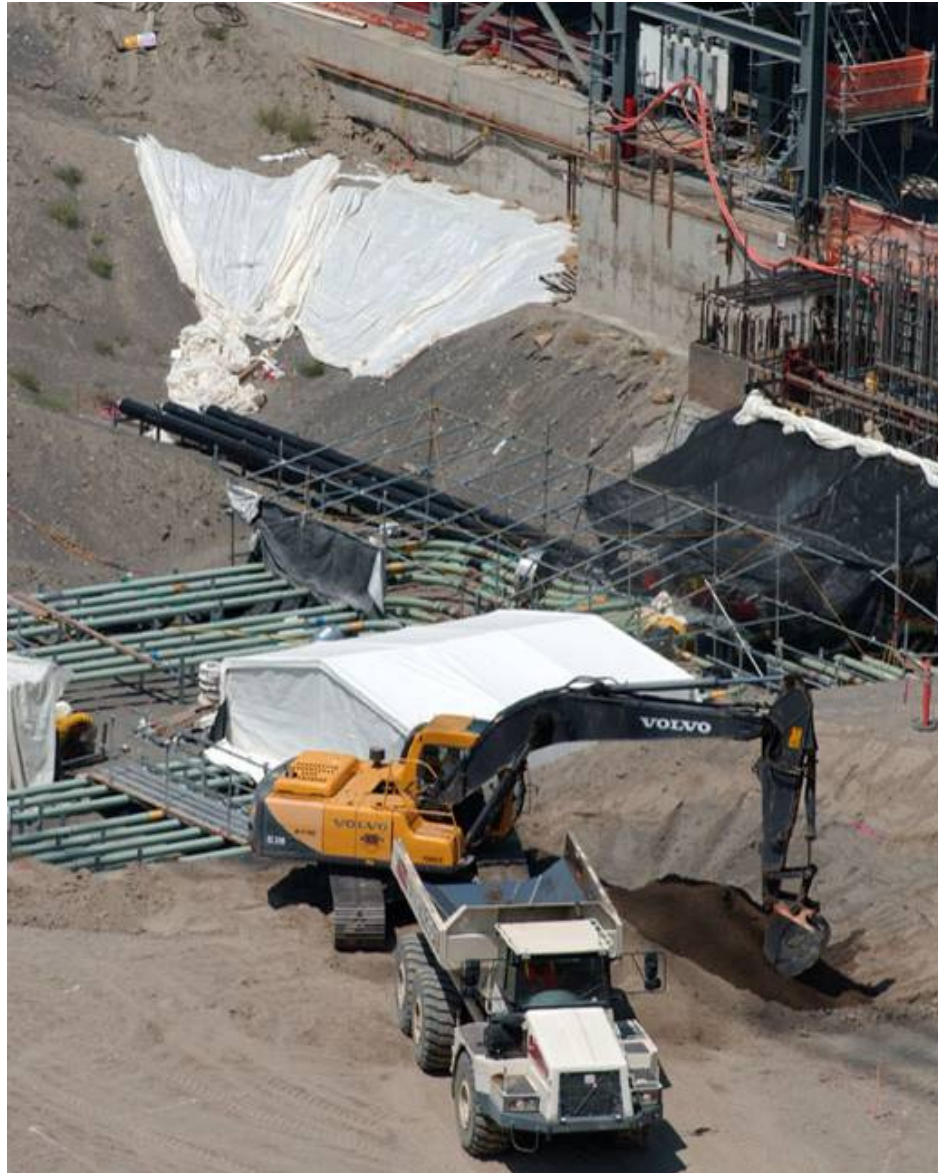


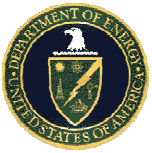
## *Prepping roof*





## *Excavation on PreTreatment Facility*



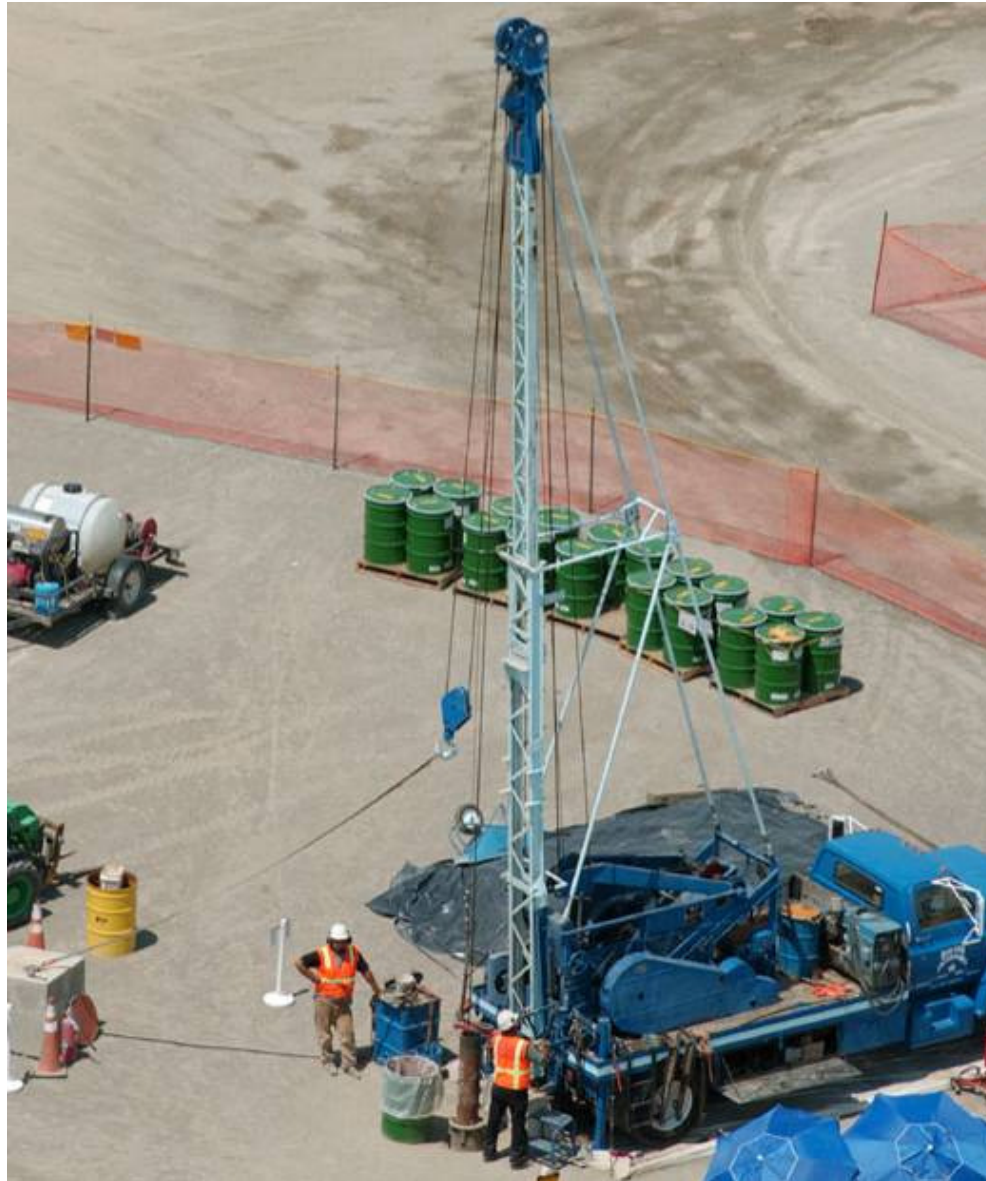


## *Final placement of LAB basemat*





## *Borehole drilling on WTP site for seismic analysis*





# *Steam Plant*

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## *Water Treatment Building Tanks*





## *Chiller Compressor Plant*





## *Cooling Tower Facility*

